

## Area of Summer Internship 2024 for the Postgraduate Students

Name of Faculty Mentor	Area of Summer Internship 2024	Remarks
<b>Department Of Astronomy, Astrophysics And Space Engineering (DAASE)</b>		
<a href="#">Dr. Unmesh Govind Khati</a>	<ol style="list-style-type: none"> <li>1. Remote sensing techniques</li> <li>2. Remote sensing applications</li> <li>3. AI/ML applications in earth observation</li> <li>4. AI/ML applications in remote sensing</li> <li>5. Modeling biophysical parameters using remote sensing data</li> <li>6. Drone based imaging and applications</li> <li>7. Drone sensor integration and calibration</li> </ol>	
<b>Department of Biosciences and Biomedical Engineering (BSBE)</b>		
<a href="#">Dr. Hem Chandra Jha</a>	<ol style="list-style-type: none"> <li>1. Role of pathogens in Gut-Brain axis</li> <li>2. Cancer treatments through small molecules</li> </ol>	
<a href="#">Professor Amit Kumar</a>	<ol style="list-style-type: none"> <li>1. Molecular Biology</li> <li>2. RNA Biology</li> <li>3. Protein Biochemistry</li> <li>4. Drug Discovery</li> </ol>	
<a href="#">Professor Prashant Kodgire</a>	<ol style="list-style-type: none"> <li>1. Molecular Immunology</li> <li>2. Molecular Biology</li> <li>3. Infectious Biology</li> </ol>	
<a href="#">Dr. Kiran Bala</a>	<ol style="list-style-type: none"> <li>1. Algal Biotechnology</li> </ol>	

	2. Metabolomics	
<a href="#">Dr. Hitendra Kumar</a>	1. Biomaterials synthesis and bioprinter development. 2. Diagnostic device development.	
<a href="#">Dr. Mirza S. Baig</a>	1. Cancer and Inflammation	
<a href="#">Dr. Lokesh Basavarajappa</a>	1. Implementation of quantitative ultrasound imaging techniques	
<a href="#">Dr. Sourav Chandra</a>	1. Biomechanics 2. Movement Neuroscience 3. Biomedical Instrumentation 4. Signal Processing	
<a href="#">Dr. Sivaraj Mohana Sundaram</a>	1. Biomedical image analysis	
<b>Department of Chemistry</b>		
<a href="#">Dr. Sampak Samanta</a>	1. Organic Synthesis	
<a href="#">Dr. Chelvam Venkatesh</a>	1. Total synthesis of biologically important natural products; Design and synthesis of heterocycles and carbocycles of biological importance; Developing new methodologies for construction of C-C and C-X (X =N,O,S,P) bonds; Design, synthesis and diagnostic applications of new targeting ligands for cancers and inflammatory diseases; 2. Drug delivery systems, near-infra red fluorescence, nuclear Imaging and bio-conjugate chemistry; Synthesis of Inhibitors for drug targets	
<a href="#">Dr. Debayan Sarkar</a>	1. Visible Light Asymmetric catalysis.	
<a href="#">Dr. Abhinav Raghuvanshi</a>	1. Synthesis and applications of luminescent Inorganic materials	

<a href="#">Professor Satya Bulusu</a>	1. Theoretical Chemistry	
<a href="#">Dr. Dipak Kumar Roy</a>	Main group and organometallic chemistry	
<b>Department of Civil Engineering</b>		
<a href="#">Professor Sandeep Chaudhary</a>	Sustainable Concrete (with following subareas) 1. Complete recovery of cement, sand and aggregate from end of life concrete. 2. Use of cow dung for the development of innovative lightweight 3. Use of discarded cement bags as fibres in concrete	
<a href="#">Professor Neelima Satyam</a>	Geotechnical Engineering	
<a href="#">Dr. Mayur Shirish Jain</a>	Waste-to-Energy; Water Quality Analysis; Circular Economy	
<a href="#">Dr. Priyank J. Sharma</a>	Hydrology, Water Resources and Climate Change	
<a href="#">Dr. Kaustav Bakshi</a>	Hygrothermal analysis of laminated composites, Impact in laminated composites	
<a href="#">Dr. Gourab Sil</a>	Traffic Engineering, Road Safety, Geometric Design	
<a href="#">Dr. Baadiga Ramu</a>	Geotechnical Engineering	
<a href="#">Dr. Sridharan Balakrishnan</a>	Hydraulic and water resources	
<b>Department of Computer Science and Engineering</b>		
<a href="#">Dr. Nagendra Kumar</a>	Natural Language Processing, Computer Vision, Machine Learning, Deep Learning, Data Mining	

<a href="#">Dr. Ayan Mondal</a>	Edge Intelligence and IoT	
<a href="#">Dr. Soumi Chattopadhyay</a>	Machine learning	
<a href="#">Dr. Subhra Mazumdar</a>	Blockchain and Distributed Systems	
<a href="#">Dr. Puneet Gupta</a>	Deep Learning, Computer vision	
<a href="#">Professor Neminath Hubballi</a>	Computer Networks, Cyber Security	
<a href="#">Dr. Surya Prakash</a>	Biometrics, Machine Learning, Deep Learning, Pattern Recognition, Computer Vision, Image Processing	
<a href="#">Professor Aruna Tiwari</a>	AI/ML, Big Data Analytics, Generative AI	
<a href="#">Dr. Ranveer Singh</a>	Algorithms	
<b>Department of Electrical Engineering</b>		
<a href="#">Professor Ram Bilas Pachori</a>	Signal Processing and Machine Learning	
<a href="#">Professor Vimal Bhatia</a>	AI/ML, Wireless Communications, Quantum Communications	
<a href="#">Dr. Swaminathan Ramabadran</a>	6G and Beyond Wireless Communications, Deep Learning for Communication	
<a href="#">Professor Santosh Kumar Vishvakarma</a>	SRAM Memory Architectures In-Memory Computing for AI Chips (SRAM, RRAM/MRAM) AI Hardware Accelerators Reliable and Secure Circuits Silicon Photonics Circuits	

<a href="#">Dr. Sumit Gautam</a>	1. Cooperative SWIPT-Caching Systems 2. Multigroup Multicasting SWIPT Systems	
<a href="#">Professor Trapti Jain</a>	Data analytics in smart grid, cyber security in smart grid	
<a href="#">Dr. Lokesh Kumar Dewangan</a>	Power Electronics and Power Systems	
<a href="#">Dr. Balasubramanyam Appina</a>	Image and video processing	
<a href="#">Dr. Saptarshi Ghosh</a>	1. Antennas for biomedical applications 2. RIS for 6G communication 3. Conformal antennas 4. FPGA-based multifunctional FSS	
<b>School of Humanities and Social Sciences</b>		
<a href="#">Professor Pritee Sharma</a>	Agricultural Economics, and Environmental Economics	
<a href="#">Dr. Kalandi Charan Pradhan</a>	Development Economics and Socioeconomic Impact of Climate Change	
<a href="#">Dr. Mohanasundari Thangavel</a>	Natural Resource and Environmental Economics	
<a href="#">Professor Ruchi Sharma</a>	Economics	
<a href="#">Dr. Akshaya Kumar</a>	Comparative Media Studies, Platform Economy	
<a href="#">Dr. Aratrika Das</a>	River Narratives, Blue Humanities	
<a href="#">Dr. Kedarmal Verma</a>	Cognitive Psychology	

<b>Department of Mathematics</b>		
<a href="#">Dr. Santanu Manna</a>	1. Mathematical Modelling 2. Local/Nonlocal elastic wave propagation 3. Earthquake Prediction Analysis	
<a href="#">Dr. Sanjeev Singh</a>	Complex Analysis and Special Functions	
<b>Department of Mechanical Engineering</b>		
<a href="#">Dr. Shanmugam Dhinakaran</a>	Computational Fluid Dynamics	
<a href="#">Dr. Santosh Kumar Sahu</a>	Thermal management of electronic devices, jet impingement cooling, synthetic jets, electric battery thermal management, phase change materials	
<a href="#">Professor Pavan Kumar Kankar</a>	Applications of machine learning, condition monitoring, reliability	
<a href="#">Dr. Harekrishna Yadav</a>	Fluid flow, heat transfer and renewable energy	
<a href="#">Dr. Dan Sathiaraj</a>	Additive Manufacturing	
<a href="#">Dr. S Janakiraman</a>	Advanced Materials for Electrochemical Energy Storage Applications	
<a href="#">Professor I A Palani</a>	Mechatronics system design and soft robotics	
<b>Department of Metallurgical Engineering and Materials Science (MEMS)</b>		
<a href="#">Dr. Hemant Borkar</a>	Lightweight alloys for automotive applications	

	Deformation behavior of light alloys Additive manufacturing of light alloys	
<a href="#">Dr. Rupesh Devan</a>	1. Materials for energy storage 2. Photoactive materials for water remediation.	
<a href="#">Dr. Jayaprakash Murugesan</a>	Additive manufacturing, Fatigue and fracture of advanced materials, alloy development, Welding Engineering, Mechanical metallurgy	
<a href="#">Dr. Ajay Kumar Kushwaha</a>	Nano and Quantum Materials Compound Semiconductors Green Hydrogen: Materials & Technologies	
<a href="#">Dr. Vinod Kumar</a>	1. Spark plasma sintering of advanced metallic systems. 2. Development of composite materials using industrial waste	
<a href="#">Dr. Dharendra Kumar Rai</a>	Energy harvesting and storage	
<b>Department of Physics</b>		
<a href="#">Professor Rajesh Kumar</a>	Raman spectroscopy and Raman Microscopy, Nanomaterials and nanodevices, Smart windows, Energy Storage Devices	
<a href="#">Professor Somaditya Sen</a>	Material Characterization	
<a href="#">Professor Preeti Anand Bhobe</a>	Electrical transport in composites	
<a href="#">Professor Sarika Jalan</a>	Nonlinear dynamics and Complex Systems, Computational biology, Machine learning	
<a href="#">Professor Krushna R. Mavani</a>	Experimental Condensed Matter Physics	

<a href="#">Dr. Manavendra N Mahato</a>	Topics in Quantum Field theory	
<a href="#">Professor Ankhi Roy</a>	Deep Inelastic Scattering	
<a href="#">Dr. Debajyoti Sarkar</a>	Theoretical Physics. String theory and gauge-gravity duality. Quantum information theory. Black hole physics. Quantum field theory. General Relativity.	
<a href="#">Dr. Alestin Mawrie</a>	Topological Insulators, Non-volatile memory	
<a href="#">Dr. Mritunjay Kumar Verma</a>	Theoretical High energy physics, quantum field theory, General relativity, string theory	
<a href="#">Dr. Dipankar Das</a>	Advanced topics in Quantum Mechanics, High Energy Physics, Statistical and Computational Methods in Physics	
<a href="#">Professor Pankaj R. Sagdeo</a>	1. Fabrication and characterization of nano materials 2. Fabrication and Characterization of multifunctional materials for various applications	

**Important Note:**

- 1. Fees once paid is non-refundable.**
- 2. The Postgraduate Students are requested to contact concerned faculty mentor for any query/clarification.**
- 3. Consent from the faculty mentor of IIT Indore is a must.**



